



International Space Station Schedule Revised by NASA

NASA will begin its on-orbit assembly of the International Space Station (ISS) no later than October 1998, and is looking at options that will allow the Agency to work around the delay caused by the late arrival of a key station module.

"We knew from the outset that building an International Space Station was going to be tremendously challenging. Space exploration is not easy or predictable," NASA Administrator Daniel S. Goldin said last week. "We will work through this schedule issue, and we undoubtedly will face additional problems in the future. But we are well on our way to the realization of this world-class facility," he said.

The change in the launch schedule is not expected to impact the construction work going on at Marshall. The plan remains for Node 1 to ship on schedule in June and the extra time will be

used to do further testing at the Kennedy Space Center prior to launch. If similar time is available on downstream Space Station hardware elements, the current plan is to ship them on schedule to Kennedy with any extra time that may become available being used for additional tests there as will be done with Node 1.

The on-orbit assembly of the International Space Station originally was scheduled to begin in November 1997 with the launch of the NASA-financed/Russian-built and launched Functional Cargo Block (FCB). Inadequate funding by the Russian government to the Russian Space Agency (RSA) and its contractors for building another key station element — the Service Module (SM) — has put construction up to eight months behind schedule.

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Decision Due Friday on Reflight of STS-83 MSL-1 Mission

Following a Shuttle program review on the possibilities of reflighting Shuttle Columbia and the Marshall-managed Microgravity Science Laboratory-1, Space Shuttle Program Manager Tommy Holloway commented on the outlook for the STS-83 mission.

"A review was held by the Shuttle program which included inputs from all disciplines involved in preparing for Space Shuttle missions, said Holloway.

"Because of the technical problem with one of Columbia's fuel cells, the first

Microgravity Science Laboratory mission had to be shortened from 16 days to four. The Shuttle manifest for the remainder of the year, while tight, appears able to accommodate a reflight of Columbia and its MSL payload in early July with reasonable impact to Shuttle launch dates for the rest of calendar year 1997.

"While shortening STS-83 was disappointing, we now are in a position to do everything possible to complete the mission as STS-83 Reflight (STS-83R) with little or no impact to downstream flights," Holloway added.

"Also, it provides us with a unique

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Open House Set for May 3

The Marshall Center will host a Community Open House on May 3, from 9 a.m. to 4 p.m.

The event will open a wide range of facilities to the public, including the NASA Communications Center, Space Sciences Laboratory, Wind Tunnel test facility, Neutral Buoyancy Simulator and the Payload Crew Training Complex.

There is no admission charge, however, souvenirs and refreshments will be available for purchase and entertainment will be provided.



Marshall Center Director Dr. Wayne Little's served as host to the NASA Alumni League last week. The program consisted of an Alumni League business session and an update on Marshall programs and activities.

Photo by Jack Ray

'Picking Up the Pace' Earth Day Observance to be Held April 22

by Paul Luz, Marshall Recycling Committee

The Marshall Center is "Picking up the Pace" for Environmental Awareness Month in April as part of the annual observance of Earth Day on April 22. Earth Day is a day "set aside to promote ecology, encourage respect for life on earth,



and highlight the problem of pollution. First observed in 1970, Earth Day is now publicly celebrated worldwide."

NASA officially began observing Earth Day when President George Bush

signed Executive Order 12780 in 1991 and decreed that "Federal agencies promote cost-effective waste reduction and recycling of reusable materials", and NASA is now operating under Executive Order 12873 by President Bill Clinton.

Marshall began recycling paper in November 1989 and soon added aluminum cans and cardboard in July 1991 after Center Director Jack Lee signed Charter Number 3-32 "to establish a Centerwide focus for the development, implementation, and management of a recycling program at Marshall." Since then, a monthly average of 25 tons of paper (equivalent to about 429 trees), 932 pounds of aluminum (approximately 27,930 cans), and 2 tons of cardboard are recycled at Marshall per month.

But that's not all. Today, Marshall continues to "Rethink, Reuse, Reduce, and Recycle" at least 13 different items — including aluminum cans, lead cell batteries, cardboard, cooking oil, foam packing peanuts, grass clippings, laser toner cartridges, motor oil & oil filters, scrap metal, telephone books, tires, trees (chipped for mulch), and white paper. Information on Marshall's

recycling efforts and future plans are accessible via the World Wide Web at <http://zaphod.msfc.nasa.gov/~httpser/recycle/rec.html>.

Earth Day events planned at Marshall include the T-shirt logo contest that was won by Margaret Saint of MSI, a display in Building 4200 from April 14 to April 22 with recycling

information, literature, and recycled sculptures and artwork by pre-school children who attend the Marshall Child Development Center, a "Spot an Environmentalist" contest, a 5K fun run on April 17 at 11:30, and our

annual tree planting ceremony with Earth Day speaker Beth Holliman-McLain, President of the Huntsville Land Trust, on April 22. This year's Earth Day tree is from the Jesse Owens Honeylocust that provided shade to the house Jesse Owens lived in at age 7. Jesse Owens set several track records while at Ohio State University, but his most lasting achievement came with his triumph over Hitler's best German athletes when he won three gold medals in Berlin's 1936 Olympics. Marshall's Earth Day tree planting on April 22 commemorates his Olympic spirit as we all continue "Picking up the Pace" in our efforts to improve the global environment.

5K Fun Run Tomorrow

On April 17 the Marshall Center Recycling Committee will sponsor a 5K fun run for employees and on-site contractors. The race will begin at 11:30 a.m. in front of Building 4752 with signups from 11 to 11:20 a.m. Those interested may also signup in advance by contacting Jeannette Bedwell at 4-1395. The top three finishers in the male and female divisions will receive awards.

LIGHT Team Gains Approval For Recommendations

On March 24 Jim Pruitt of the Training, Career Development, and Dual Career Ladder Project LIGHT Team gave the team's final report and recommendations to the Executive Steering Committee. The following recommendations were approved for implementation:

Assure that every employee has a training and development plan.

- Communicate the opportunities for participating in career development programs consistently across the Center.

- Implement a reliable mentoring process and augment with formal training.

- Establish a common set of workplace competencies for all employees.

Focus Training on Strategic Needs

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Students with the Community Intensive Treatment for Youth (CITY) program receive an overview on the insulation surrounding the Solid Rocket Booster nose cap in the Productivity Enhancement Complex from Gail Gordon, chief of the Nonmetallics Processes Branch. The students toured the center last week as part of the initial community outreach efforts provided by Marshall employees who have volunteered to serve as mentors for at-risk youth. The next tour for at-risk students will be during the Marshall Open House event on May 3.

Photo by Danny Reeves

International Space Station

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NASA managers and engineers have been reviewing various options to mitigate the impact to the ISS program of the current schedule slip of the Service Module, and to begin the steps necessary to mitigate the impact of potential additional Russian delays. RSA has been a joint participant in the effort to identify these steps. Options under consideration are:

- Modify the FGB to allow for on-orbit refueling and upgrade of its avionics capability. These changes will give the FGB the capability to augment the early control and reboost capabilities to protect for a Service Module delay.

- Develop an Interim Control Module (ICM) in conjunction with the Naval Research Laboratory to provide reboost capability and attitude control in the event that the SM experiences further delays, or propellant storage/reboost capability if the SM is launched on time.

- Consider the installation of life support systems in the U.S. lab to allow early human presence on the ISS.

- Define options involving the ICM to provide the functions of a permanent propulsion module in order to complement Russian logistics capability and to provide roll control to replace or complement the Russian Science Power Platform functions.

NASA will determine the timing for decisions which need to be made in the event that Russia is unable to provide its agreed contributions to the ISS program. These decision points will be selected to allow for the timely provision of an alternative capability.

STS-83 Reflight Decision

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opportunity to demonstrate our ability to respond to challenges such as this one," he said.

"We intend to make a final decision on flying STS-83R next Friday once all organizations have made further schedule assessments."

Despite an abbreviated time in orbit, several MSL science teams were able to conduct some of their key experiment runs. The experience heightened their anticipation of obtaining much more extensive data from a full-duration flight.

Day Care Center to Have Open House

The Marshall Child Development Center will be having an Open House on April 19 from 9 - 11 a.m. All personnel are invited to come by and tour the newly expanded facility in Building 4494. Visitors will enjoy refreshments, door prizes, parenting literature, balloons, a clown and face painting.



Australian TV documentary producer Alan Hall (right) was at Marshall during the Microgravity Science Laboratory (MSL-1) mission, filming scenes for a Discovery Channel program called "The Astronaut." Activity at the Neutral Buoyancy Simulator also attracted his attention, including tests in support of the International Space Station. Hall is shown interviewing astronauts Mike Anderson and Jim Reilly, who had just completed an NBS dive to evaluate procedures for transferring an array of equipment from the Space Shuttle cargo bay to the Space Station. Four other astronauts also participated in the three-day series of dives. The crew procedures being evaluated in the tests will include the first on-orbit removal of a Spacelab pallet from the Shuttle cargo bay, according to Jerry Maxwell of the Payload Projects Office. **Photo by Emmett Given**

Project LIGHT

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- Link training more closely to the strategic needs of the Center.

- Increase the annual training budget based on strategic needs.

- Evaluate training's impact on job performance regularly.

Internalize Training

- Increase mentoring and coaching skills for supervisors.

- Shift to more on-the-job training and training through job rotation.

- Increase the number of employee-taught training courses.

Improve Communication of Training Successes

- Recognize employee training and development successes throughout the Center.

- Use intranet to communicate training opportunities.

- Promote new ways for employees and teams to learn, both inside and outside the classroom.

- Make the dual career ladder process "real" at the Center by developing a process that can be communicated.

- Provide clear information on how the dual career process works and how to participate in it.

- Establish a recognition system for employees who have demonstrated exceptional and sustained technical excellence.

Members of the team that studied the issues and prepared the report are: CN21/Linda Carpenter, ES93/Wesley Darbro, EO01/Harvey Golden, GP24F/Chrissa Hall, LA10/Rosa Kilpatrick, CE01/Willie Love, CL01/Jim Pruitt, EH42/Jeneene Sams, ED23/Dr. Mike Tinker, and CM21/Greg Walker.

The Project LIGHT Executive Steering Committee has assigned responsibility to appropriate Center organizations to begin implementation of the approved recommendations.

Marshall's 'Take Our Children to Work Day' set for June 19

Employee Ads

Miscellaneous

- ★ Graco play yard \$35; Gerry safety gate \$20; toddler toys, Rossignol 185cm snow ski \$50. 772-4153
- ★ Large swing set \$20. 851-6249
- ★ 9mm Sig 226 pistol new in box never fired \$625. 232-9632
- ★ Infant carseat \$20; stroller \$35; travel-crib \$45; highchair \$25; Disney cribpads \$15; and walker \$28. 880-7106
- ★ Headstrom 16" girls bike \$10; Murray 20" girls bike \$25; Cozy coupe car \$20. 859-9856
- ★ Black prom dress size 11/12 worn once, beautiful black sequins \$75. 533-7985
- ★ Pingpong table, little used \$50. 534-9828
- ★ Murray self-propelled mower \$125 o.b.o. 883-0503
- ★ Drafting board, tee square \$5; 8 track tapes, amplifier, speakers \$25. 881-8648
- ★ IMB correcting Selectric II typewriter recently serviced, typewriter stand (metal) and extra fonts \$200. 379-3788
- ★ PC games: Master of Orion, Master of Magic, XCOM: Terror Deep, Task Force 1942, \$10 each. 828-9651
- ★ Membership at Little Mountain Marina on Lake Guntersville. Lodges, camping, fishing, boating, swimming etc. 881-0645
- ★ Fifth wheel hatch, steel toolbox w/chrome lids, vented tailgate, towing mirrors fit 90-97 Chev/GMC. 881-9094

Vehicles

- ★ 1994 Dodge Grand Caravan, one owner, 84K, \$9,100. 837-0085
- ★ 1992 Toyota Corolla DX 99.5K miles, new tires \$5,850 o.b.o. 880-0881
- ★ 1981 Honda Civic hatchback, new clutch, rebuilt carburetor, clean, sound engine \$650. 851-6249
- ★ 1990 Jeep Cherokee Laredo 4x4, towing pkg, 76K miles \$10,500 o.b.o. 851-2929
- ★ 1978 VW Rabbit, 4-speed, one owner \$600. 880-9400
- ★ 1995 Ford Explorer sport, red, one owner \$17,000. 830-1834
- ★ 1985 Oldsmobile Firenza Wagon, 4 cyl., auto, new tires, factory sport wheels \$1,175. 205-753-2278
- ★ 1987 Reliant \$875. 880-2761
- ★ 1987 Dodge conversion van, hi-top, hitch \$6,950. 536-8951

- ★ 1992 Saturn 28K miles, best offer. 539-7597
- ★ 1990 Camry, 4-door, auto, high miles \$3,500. 837-0085
- ★ 1987 Mazda 626, white, 5-speed, Michelins, all options, immaculate, maintenance current with records, manuals \$3,750. 881-8556
- ★ 1990 Buick Riviera, red, 79K miles \$7,000. 881-2601

Wanted

- ★ Dining room set, cherry or mahogany. 883-2757

Center Announcements

- ✦ **AGA**—The North Alabama Chapter of the Association of Government Accountants will hold its monthly meeting on April 17 at the Holiday Inn, Madison Square Mall. Guest speaker is Dave Bates, Chief Financial Officer for Marshall. Topic is "Full Cost Accounting and Viability of Government Programs." Social hour starts at 5:30 p.m. with dinner at 6 p.m. For reservations contact Sandra Julian, 876-2373.
- ✦ **MOO**—The Management Operations Office retirees will hold their monthly meeting for breakfast/lunch on April 24 at the Cracker Barrel in Madison at 10 a.m. All present or former MOO employees are welcome. If there are any questions call 539-0042
- ✦ **MMA**—The Marshall Management Association is conducting a midyear membership drive until May 9. Membership in this organization for the rest of the year can be obtained with a \$15 fee. Meetings are held every quarter and the program generally consists of a social hour, dinner and a presentation given by a guest speaker. Interested individuals may forward their payment to John Cather/GP50.
- ✦ **MARS**—The MARS Golf Tournament is scheduled for May 3 at Plantation Point. The format for the tournament will be two-man best ball. Deadline for entries is 12 noon on April 25. Entry fee is \$4 and green fees will be paid at the course. Open to all MSFC employees or retirees. Entry contacts are L. Foster (4-1589), J. Butler (4-3808), J. Loose (4-2422) and R. Harwell (4-2684). For more information call S. Tillery at 4-8651.
- ✦ **Blood Drive**—The American Red Cross will be at Bldg. 4752 on April 18 until 1:30 p.m. for the monthly Marshall Blood Drive visit. The following schedule should eliminate long waiting periods: T - Z, 8 a.m.; Q - S, 8:30 a.m.;

M - P, 9 a.m.; I - L, 9:30 a.m.; F - H, 10 a.m.; C - E, 10:30 a.m.; and A - B, 11 a.m. Marshall employees who serve as blood donors without compensation will be authorized 4 hours of excused absence for this purpose. A longer period may be authorized only when required for recuperation. Contractor personnel will comply with the policy of their respective companies.

- ✦ **Third Annual Bookfair**—The third NASA Exchange-sponsored Bookfair will be held April 22-24, from 8 a.m. - 4 p.m. in Bldg. 4200, Rm. G13. Available for purchase at substantial savings, selections will include best sellers; sports and children's books; and books on cooking and decorating. For more information contact Carol Wasserman at 4-7564.
- ✦ **MESA**—The April meeting of the Marshall Engineers and Scientists Association (MESA), IFPTE Local 27 will be held April 17 at 11:30 a.m. in the MESA Office, Bldg. 4471, Room C105. Refreshments will be served and all members are invited.
- ✦ **Locker Contents**—The NASA Exchange is holding the contents from several lockers which were cleaned out in December 1996. These items can be picked up Monday through Friday from 7 a.m. to 4:30 p.m. Any items not claimed by April 24 will be discarded. If you have any questions please call 544-3337.

Job Opportunities

CPP 97-18-CP, Supv. AST, Technical Resources Management, GS-801-15, Ofc. of Chief Financial Officer, Project Analysis Ofc. Closes April 17.
CPP 97-24-DC, AST, Data Systems, GS-854-14, S&E, Astrionics Lab., Software & Simulation Div., Simulation & Computer Systems Branch. Closes April 17.
CPP 97-25-DC, AST, Data Systems, GS-854-14, S&E, Astrionics Lab., Software & Simulation Div., Software Management & Test Branch. Closes April 17.
Reassignment Bulletin 97-8-CL (2 vacancies), AST, Experimental Facilities Dev., GS-801-13, Facilities Ofc., Planning and Integration Div. and Engineering Div. Closes April 28.
SES Vacancy Announcement - Director, Systems Analysis & Integration Lab. (MSFC-ES-03-97). Closes April 22.
SES Vacancy Announcement - Deputy Director, Astrionics Lab. (MSFC-ES-05-97). Closes April 22.
SES Vacancy Announcement - Deputy Director, Space Sciences Lab. (MSFC-ES-04-97). Closes April 22.

MARSHALL STAR

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